

Title (en)

Drug-Delivery Endovascular Stent and Method for Treating Restenosis

Title (de)

Endovaskulärer Arzneimittelabgabe-Stent und Verfahren zur Behandlung von Restenose

Title (fr)

Endoprothese endovasculaire pour la distribution de médicaments et procédé de traitement de la resténose

Publication

EP 2113230 A2 20091104 (EN)

Application

EP 09160438 A 20030424

Priority

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- EP 03747310 A 20030424
- US 13381402 A 20020424

Abstract (en)

An endovascular stent (20) for placement at a vascular injury site for inhibiting restenosis at the site comprises a body (22) having an open lattice structure formed of linked filaments (24, 26), and a drug-release coating carried on the filaments, the coating having a thickness of between 3-30 microns and composed of (i) 20 to 80 weight percent polymer substrate and (ii) 20 to 80 weight percent macrocyclic triene compound. The stent is expandable from a contracted condition, in which the stent can be delivered to a vascular injury site via catheter, and an expanded condition, in which the stent coating can be placed in contact with the vessel at the injury site. The coating is effective to release an amount of the compound to inhibit restenosis at the site.

IPC 8 full level

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CPC (source: EP US)

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C-Set (source: EP US)

1. **A61L 31/10 + C08L 29/04**
2. **A61L 31/10 + C08L 67/04**

Citation (applicant)

- WO 9907308 A1 19990218 - SUNSCOPE INTERNATIONAL [US]
- US 6099562 A 20000808 - DING NI [US], et al
- US 5873904 A 19990223 - RAGHEB ANTHONY O [US], et al
- US 5342348 A 19940830 - KAPLAN AARON V [US]
- US 5707385 A 19980113 - WILLIAMS MICHAEL S [US]
- US 5824048 A 19981020 - TUCH RONALD J [US]
- US 5527337 A 19960618 - STACK RICHARD S [US], et al
- US 5306286 A 19940426 - STACK RICHARD S [US], et al
- US 6013853 A 20000111 - ATHANASIOU KYRIACOS A [US], et al
- US 6231600 B1 20010515 - ZHONG SHENG-PING [US]
- US 5288711 A 19940222 - MITCHELL ROBERT D [US], et al
- US 6159488 A 20001212 - NAGLER ARNON [IL], et al
- US 6171609 B1 20010109 - KUNZ LAWRENCE L [US]
- US 5176908 A 19930105 - WISSNER ALLAN [US], et al
- US 5733327 A 19980331 - IGAKI KEIJI [JP], et al
- US 6153252 A 20001128 - HOSSAIN SYED F A [US], et al
- WO 9735575 A1 19971002 - CIBA GEIGY AG [CH], et al
- WO 9907308 A1 19990218 - SUNSCOPE INTERNATIONAL [US]
- US 6190406 B1 20010220 - DUERIG THOMAS [US], et al
- US 6042606 A 20000328 - FRANTZEN JOHN J [US]
- US 5860999 A 19990119 - SCHNEPP-PESCH WOLFRAM [DE], et al
- US 6129755 A 20001010 - MATHIS MARK [US], et al
- US 5902317 A 19990511 - KLESHINSKI STEPHEN J [US], et al
- US 2001027340 A1 20011004 - WRIGHT CAROL [US], et al
- WO 9735575 A1 19971002 - CIBA GEIGY AG [CH], et al
- US 6273913 B1 20010814 - WRIGHT CAROL [US], et al
- US 17608600 P 20000114
- US 2001029351 A1 20011011 - FALOTICO ROBERT [US], et al
- US 4990155 A 19910205 - WILKOFF HOWARD M [US]
- US 6080177 A 20000627 - IGAKI KEIJI [JP], et al
- US 6299604 B1 20011009 - RAGHEB ANTHONY O [US], et al

Cited by

US9592323B2; US10064982B2; US9387282B2; US10076591B2

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US 2003125800 A1 20030703; US 6939376 B2 20050906; AT E451075 T1 20091215; AU 2003231757 A1 20031110;
AU 2003231757 B2 20090709; AU 2003231759 A1 20031110; AU 2003231759 B2 20090205; AU 2009201655 A1 20090521;
AU 2009201655 B2 20110324; CN 101862233 A 20101020; CN 101862233 B 20120905; CN 1649551 A 20050803; CN 1649551 B 20100811;
CN 1735402 A 20060215; DE 60330455 D1 20100121; EP 1505930 A2 20050216; EP 1505930 A4 20060503; EP 1505930 B1 20140730;
EP 1518517 A2 20050330; EP 1518517 A3 20051214; EP 1518517 B1 20091209; EP 2113230 A2 20091104; EP 2113230 A3 20100623;
EP 2316377 A1 20110504; EP 2316377 B1 20141105; EP 2417943 A1 20120215; EP 2417943 B1 20140827; EP 2578186 A2 20130410;
EP 2578186 A3 20130522; EP 2578186 B1 20140723; ES 2335406 T3 20100326; ES 2514391 T3 20141028; ES 2522277 T3 20141114;
ES 2523870 T3 20141202; HK 1150229 A1 20111111; HK 1156494 A1 20120615; HK 1177882 A1 20130830; JP 2005523119 A 20050804;
JP 2005523332 A 20050804; JP 2008279278 A 20081120; JP 2009011847 A 20090122; JP 2012091032 A 20120517;
JP 2012205920 A 20121025; JP 2013121509 A 20130620; JP 2014087714 A 20140515; JP 4315817 B2 20090819; JP 5113667 B2 20130109;
JP 5461624 B2 20140402; JP 5726777 B2 20150603; JP 5827355 B2 20151202; US 2003225450 A1 20031204; US 2005038505 A1 20050217;
US 2010312328 A1 20101209; US 2013035754 A1 20130207; US 2014200654 A1 20140717; US 7727275 B2 20100601;
US 8308795 B2 20121113; US 8715341 B2 20140506; WO 03090684 A2 20031106; WO 03090684 A3 20040226; WO 03090684 A8 20041216;
WO 03090684 B1 20040513; WO 03090818 A2 20031106; WO 03090818 A3 20031204

DOCDB simple family (application)

US 13381402 A 20020424; AT 04078429 T 20030424; AU 2003231757 A 20030424; AU 2003231759 A 20030424; AU 2009201655 A 20090427;
CN 03809309 A 20030424; CN 03809311 A 20030424; CN 201010200321 A 20030424; DE 60330455 T 20030424; EP 03747310 A 20030424;
EP 04078429 A 20030424; EP 09160438 A 20030424; EP 10185483 A 20030424; EP 11185222 A 20030424; EP 12191560 A 20030424;
ES 03747310 T 20030424; ES 04078429 T 20030424; ES 10185483 T 20030424; ES 12191560 T 20030424; HK 11104004 A 20110420;
HK 11110804 A 20100429; HK 13104941 A 20100429; JP 2003587323 A 20030424; JP 2003587443 A 20030424; JP 2008209129 A 20080815;
JP 2008209130 A 20080815; JP 2012024617 A 20120208; JP 2012153286 A 20120709; JP 2012274329 A 20121217;
JP 2014030790 A 20140220; US 0312746 W 20030424; US 0312750 W 20030424; US 201213647977 A 20121009;
US 201414217948 A 20140318; US 38242903 A 20030305; US 69631810 A 20100129; US 94627504 A 20040920